REMARKS

Reconsideration and allowance of the subject application in view of the foregoing amendments and the following remarks is respectfully requested.

Withdrawal of the Final Rejection of July 21, 2005 in view of applicant's arguments is noted with appreciation.

Claims 1-4 and 6-16 are pending.

Claims 1-4, 6, 9-11, and 13-16 are patentable over Applicant's Admitted Prior Art (AAPA) in view of van der Pol et al. (U.S. Patent 6,397,133, the '133 Patent)

The rejection of claims 1-4, 6, 9-11, and 13-16 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of van der Pol is hereby traversed. There are at least four reasons the Office Action is incorrect and the rejection should be withdrawn.

Van der Pol is not enabled prior art

First, the instant application was filed on March 7, 2001 and claims the priority of U.S. Provisional Application Serial No. 60/187,552 filed March 7, 2000 van der Pol was filed April 18, 2000 and claims priority to U.S. Provisional Application Serial No. 60/129,984 (the '984 provisional) filed April 19, 1999; however, the prior provisional van der Pol application fails to provide an enabling support for the subject matter relied on by the Patent and Trademark Office (PTO) in the present Office Action.

The PTO asserts that van der Pol discloses determination of pitch and roll information based on longitudinal, vertical, and lateral acceleration information without the need for information from a gyro at column 10, lines 29-39 in the '133 Patent. The cited portion of the '133 Patent is reproduced below for ease of reference:

> The rollover calculator 106 receives signals indicative of the angular orientation (i.e., roll and pitch) of a vehicle from the dual-axis tilt sensor 102 and also receives signals indicative of the lateral and/or longitudinal acceleration of the vehicle from the dual-axis accelerometer 104. In this regard, a first micro-electromechanical system (MEMS) accelerometer could be configured as a dual-axis tilt sensor 102, and a second MEMS accelerometer could be configured as a dual-axis accelerometer 104. One such MEMS accelerometer is the ADXL202 accelerometer manufactured and distributed by Analog Devices, Inc. of Norwood Mass. Also, as mentioned above, U.S. Pat. No. 6,038,495
>
> van der Pol at column 10, lines 29-40.

The underlying prior provisional van der Pol application fails to provide an enabling support for the above-cited portion of the '133 Patent. In particular, the '984 provisional states, with respect to the dual-axis tilt sensors, only the following:

> The device has one or more dual-axis tilt sensors. These sensors measure the orientation (angle) of the vehicle relative to the horizon. The sensors measure both lateral (sideways) and longitudinal (forward/backward) angles.
>
> '984 provisional at page 4, second full paragraph.

The '984 provisional fails to provide an enabling disclosure of at least the micro-electromechanical system accelerometers of the '133 Patent. Based on the foregoing, at least the dual-axis tilt sensors as accelerometers of the '133 Patent are not supported in the '984 provisional and the '133 Patent cannot rely on the priority of the '984 provisional. As such, the '133 Patent fails to precede the present application and the reference is not prior art and should be withdrawn. For at least this reason, withdrawal of the rejection is respectfully requested.

Van der Pol fails to disclose at least determining pitch from vertical acceleration and longitudinal acceleration

Second, even assuming arguendo that van der Pol (the '133 Patent) was entitled to the earlier-claimed filing date, van der Pol (the '133 Patent) fails to disclose at least the step of "determining a pitch of the vehicle from said vertical acceleration information and said longitudinal acceleration information" as claimed in the present claimed subject matter. Van der Pol states only that "signals indicative of the angular orientation (i.e., roll and pitch)" are received from a dual-axis tilt sensor without indicating that the pitch is determined from vertical acceleration information and longitudinal information.

Van der Pol (the '133 Patent) specifically separates the description of the receipt of signals indicative of the lateral and/or longitudinal acceleration of the vehicle from the signals indicative of the angular orientation. The lateral and/or longitudinal acceleration indicative signals are not disclosed as being used to determine pitch in van der Pol the '133 Patent). For at least this reason, withdrawal of the rejection is respectfully requested.

Further, the '984 provisional describes the dual-axis tilt sensors as providing only angle information, i.e., the "sensors measure the orientation (angle) of the vehicle relative to the horizon. The sensors measure both lateral (sideways) and longitudinal (forward/backward) angles." '984 provisional at page 4, second full paragraph (emphasis added). The dual-axis tilt sensors are not described as providing longitudinal acceleration information or vertical acceleration information. Based on the foregoing, the '984 provisional fails to disclose the claimed step of determining pitch from vertical acceleration information and longitudinal acceleration information. For at least this reason, withdrawal of the rejection is respectfully requested.

Van der Pol recites gyros for determining pitch and/or roll

Third, the PTO asserts in the present Office Action that van der Pol (the '133 Patent) discloses determination of pitch and roll information "without the need for information from a gyro." Office Action mailed January 5, 2006 at page 2, final sentence. Van der Pol (the '133 Patent) describes the dual-axis tilt sensor as being a sensor including a roll angular rate sensor, a pitch angular rate sensor, and a vertical accelerometer according to U.S. Patent 6,038,495. The '495 Patent describes the angular rate sensors as gyros, see column 1, line 38. For at least this reason, withdrawal of the rejection is respectfully requested.

Combination of AAPA with van der Pol

Fourth, the PTO has failed to identify any motivation or suggestion in either reference teaching, suggesting, or describing the asserted combination. In accordance with MPEP §2143.01 and Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999), the PTO is requested to identify a teaching, suggestion, or motivation in either reference or to provide an affidavit of facts within the personal knowledge of the Examiner per MPEP §2144.03 providing a motivation or suggestion to one of ordinary skill in the art to make the argued combination.

"When an obviousness determination is based on multiple prior art references, there must be a showing of some 'teaching, suggestion, or reason' to combine the references." Winner International Royalty Corp. v. Wang, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000). The PTO has failed to make such a showing supporting the applied combination of references and therefore the applied combination of references is improper. The Office Action is in error for at least the above reasons and has not made out a prima facie case of obviousness, and the rejection of claim 1 should be withdrawn.

Based on the foregoing, claim 1 is patentable over AAPA in view of van der Pol and the rejection is respectfully requested to be withdrawn.

Claims 2, 3, and 6 depend from claim 1, include further limitations, and are patentable over the applied combination of references for at least the reasons advanced above with respect to claim 1. The rejection of claims 2, 3, and 6 is respectfully requested to be withdrawn.

Claim 4 is patentable over the applied combination of references for at least reasons similar to those advanced above with respect to claim 1 and the rejection is respectfully requested to be withdrawn.

Claim 9 depends from claim 4, includes further limitations, and is patentable over the applied combination of references for at least the reasons advanced above with respect to claim 4. The rejection of claim 9 is respectfully requested to be withdrawn.

Claim 10 is patentable over the applied combination of references for at least reasons similar to those advanced above with respect to claim 1 and the rejection is respectfully requested to be withdrawn.

Claim 11 depends from claim 10, includes further limitations, and is patentable over the applied combination of references for at least the reasons advanced above with respect to claim 10. The rejection of claim 11 is respectfully requested to be withdrawn.

Claim 13 is patentable over the applied combination of references for at least the first reason advanced above with respect to claim 1 and the rejection is respectfully requested to be withdrawn.

Claims 14-16 depend from claim 13, include further limitations, and are patentable over the applied combination of references for at least the reasons advanced above with respect to claim 13. The rejection of claims 14-16 is respectfully requested to be withdrawn.

Claim 7 is patentable over AAPA in view of van der Pol and Shimizu et al. (U. S. Patent 5,115,238)

The rejection of claim 7 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of van der Pol and further in view of Shimizu is hereby traversed. As described above, claim 4, from which claim 7 depends, is patentable over the combination of AAPA and van der Pol. The combination with Shimizu fails to cure the above-noted deficiencies of AAPA and van der Pol and the rejection should be withdrawn.

Further, the PTO has failed to identify any motivation or suggestion in either reference teaching, suggesting, or describing the asserted combination. In accordance with MPEP §2143.01 and Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999),

the PTO is requested to identify a teaching, suggestion, or motivation in either reference or to provide an affidavit of facts within the personal knowledge of the Examiner per MPEP §2144.03 providing a motivation or suggestion to one of ordinary skill in the art to make the argued combination.

"When an obviousness determination is based on multiple prior art references, there must be a showing of some 'teaching, suggestion, or reason' to combine the references." Winner International Royalty Corp. v. Wang, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000). The PTO has failed to make such a showing supporting the applied combination of references and therefore the applied combination of references is improper. The Office Action is in error for at least the above reasons and has not made out a prima facie case of obviousness, and the rejection of claim 7 should be withdrawn.

Based on either of the foregoing reasons, the rejection of claim 7 is respectfully requested to be withdrawn.

Claims 8 and 12 are patentable over AAPA in view of van der Pol and Kato et al. (U.S. Patent 5,796,613)

The rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of van der Pol and further in view of Kato is hereby traversed. As described above, claim 4, from which claim 8 depends, is patentable over the combination of AAPA and van der Pol. The combination with Kato fails to cure the above-noted deficiencies of AAPA and van der Pol and the rejection should be withdrawn.

Further, the PTO has failed to identify any motivation or suggestion in either reference teaching, suggesting, or describing the asserted combination. In accordance with MPEP §2143.01 and Al-Site Corp. v. VSI Int'l Inc., 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999), the PTO is requested to identify a teaching, suggestion, or motivation in either reference or to provide an affidavit of facts within the personal knowledge of the Examiner per MPEP §2144.03 providing a motivation or suggestion to one of ordinary skill in the art to make the argued combination.

"When an obviousness determination is based on multiple prior art references, there must be a showing of some 'teaching, suggestion, or reason' to combine the references." Winner International Royalty Corp. v. Wang, 53 USPQ2d 1580, 1586 (Fed. Cir. 2000). The PTO has failed to make such a showing supporting the applied combination of references and therefore the applied combination of references is improper. In particular, the Office Action states that that combination would result in reduced components and connections; however, an additional component, i.e., the GPS sensor, will still need to be added even assuming the combination with Kato is correct. The Office Action is in error for at least the above reasons and has not made out a prima facie case of obviousness, and the rejection of claims 8 and 12 should be withdrawn.

Based on either of the foregoing reasons, the rejection of claims 8 and 12 is respectfully requested to be withdrawn.

Conclusion

Based on the foregoing, claims 1-4, and 6-16 are patentable and the rejections applied should be withdrawn in favor of a notice of allowability.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

LOWE HAUPTMAN & BERNER, LLP

Randy A. Noranbrock
Registration No. 42,940

Customer Number: 22429
1700 Diagonal Road, Suite 300
Alexandria, Virginia 22314
(703) 684-1111
(703) 518-5499 Facsimile
Date: April 5, 2006
KMB/RAN/iyr